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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/932,523	08/17/2001	Dan-Cheng Kong	2001B078	4274

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EXAMINER

PATTERSON, MARC A

ART UNIT	PAPER NUMBER
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1772

DATE MAILED: 10/14/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/932,523

Applicant(s)

KONG, DAN-CHENG

Examiner

Marc A Patterson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 July 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 23-36,38 and 39 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 23-36,38 and 39 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

NEW REJECTIONS

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 23 – 26, 30 – 31 and 33 – 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over McCarthy et al (U.S. Patent No. 5,883,199) in view of Kanamori et al (U.S. Patent No. 6,262,184).

With regard to Claim 23 and 25 – 26, McCarthy et al disclose a thermoplastic multi – layer film (laminated paper; column 7, lines 46 – 48) comprising 60% by weight of a polylactic acid (column 2, lines 30 – 36) comprising any amount of 1 to 8 mol% of D-lactic acid (any amount; column 2, lines 30 – 36) and 40% of a toughening additive comprising a polymer or copolymer of polybutylenesuccinate (column 2, lines 10 – 15). McCarthy et al fail to disclose a copolymer which comprises a polyurethane.

Kanamori et al teach the blending of polylactic acid with a polyester carbontate (column 3, lines 35 – 36) for the purpose of obtaining a polylactic acid composition having improved impact resistance (column 3, line 30); the acid component of the polyester comprises succinic acid (column 5, line 8) and the dihydroxy component comprises 1,4 butanediol (column 5, line 16); the polyester therefore comprises polybutylenesuccinate; the polyester is chain extended with a diisocyanate compound (column 7, line 64) polymerized with tartaric acid (column 7,

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lines 52 – 54) and therefore is a polyurethane, as it comprises urethane functionality. Therefore, one of ordinary skill in the art would have recognized the advantage of providing for the polyurethane taught by Kanamori et al in McCarthy et al, which comprises a toughening agent comprising polybutylenesuccinate, depending on the desired impact resistance of the end product as taught by Kanamori et al

It therefore would have been obvious for one of ordinary skill in the art at the time Applicant's invention was made to have provided for polyurethane in McCarthy et al in order to obtain a polylactic acid composition having improved impact resistance as taught by Kanamori et al.

With regard to Claim 24 and 33 – 35, McCarthy et al disclose a laminate of the polylactic acid and paper (laminated paper; column 7, lines 46 – 48). McCarthy et al therefore disclose a paper layer laminated on one or both of its sides with the film, and therefore discloses a second layer comprising a skin layer.

McCarthy et al disclose a multilayer film comprising polylactic acid as discussed above. With regard to Claims 30 – 31, McCarthy et al fail to disclose a film having a thickness of 3 mils. However, McCarthy et al disclose a film having a thickness of 12 mils (0.3 millimeter; column 6, lines 67) and teach a film having improved toughness properties (column 2, line 20). Therefore one of ordinary skill in the art would have recognized the utility of varying the thickness of the layer to obtain a desired toughness. Therefore, the toughness would be readily determined through routine optimization of thickness by one having ordinary skill in the art depending on the desired end use of the product.

It therefore would be obvious for one of ordinary skill in the art to vary the thickness in order to obtain a desired toughness, since the thickness would be readily determined through routine optimization by one having ordinary skill in the art depending on the desired end result as shown by McCarthy.

3. Claims 27 and 36 and 38 – 39 are rejected under 35 U.S.C. 103(a) as being unpatentable over McCarthy et al (U.S. Patent No. 5,883,199) in view of Kanamori et al (U.S. Patent No. 6,262,184) and further in view of Tokushige et al (U.S. Patent No. 5,866,634).

McCarthy et al and Kanamori et al disclose a multilayer film comprising polylactic acid as discussed above. The film is a packaging material (column 4, lines 41 – 52 of McCarthy). With regard to Claims 36 and 38 – 39, McCarthy et al fail to disclose a film which is a sleeve label applied to a container with an adhesive and which comprises an antiblocking agent.

Tokushige et al teaches that it is equivalent to use a film comprising polylactic acid (column 4, lines 59 – 65 of Tokushige et al) as a packaging material or a label for application to bottles (therefore a sleeve label which is applied to the container with an adhesive adjacent to the surface; column 4, lines 41 – 54 of Tokushige et al) for the purpose of obtaining a label which is excellent in printability (column 4, lines 41 – 51 of Tokushige et al). Therefore, one of ordinary skill in the art would have recognized the advantage of providing for the label and adhesive of Tokushige et al in McCarthy et al and Kanamori et al, which comprises polylactic acid, depending on the printability of the end product as taught by Tokushige et al.

It therefore would have been obvious for one of ordinary skill in the art at the time Applicant's invention was made to have provided for a sleeve label in McCarthy et al and Kanamori et al in order to obtain excellent printability as taught by Tokushige et al.

With regard to Claim 27, Tokushige et al disclose an antiblocking agent (lubricant; column 3, line 11 of Tokushige et al).

4. Claims 28 – 29 and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over McCarthy et al (U.S. Patent No. 5,883,199) in view of Kanamori et al (U.S. Patent No. 6,262,184) and Tokushige et al (U.S. Patent No. 5,866,634) and further in view of Ikado et al (U.S. Patent No. 5,766,748).

McCarthy et al, Kanamori et al and Tokushige et al disclose a polymer film as discussed above. With regard to Claims 28 – 29 and 32, McCarthy et al, Kanamori et al and Tokushige et al fail to disclose a film which is cavitated and which comprises calcium carbonate, and a film which is biaxially oriented.

Ikado et al teach a film which comprises calcium carbonate as a filler (the film therefore comprises cavities, containing the calcium carbonate; column 3, lines 58 – 61) and is biaxially oriented (column 3, lines 65 – 66) for the purpose of obtaining a film having an improved level of durability (column 1, lines 60 – 65). Therefore, one of ordinary skill in the art would have recognized the advantage of providing for the calcium carbonate and cavitation and biaxial orientation of Ikado et al in McCarthy et al, Kanamori et al and Tokushige et al, which comprises a polymer film depending on the desired durability of the end product.

It therefore would have been obvious for one of ordinary skill in the art at the time Applicant's invention was made to have provided for the calcium carbonate and cavitation and

biaxial orientation of Ikado et al in McCarthy et al, Kanamori et al and Tokushige et al in order to obtain a film having an improved level of durability as taught by Ikado et al.

ANSWERS TO APPLICANT'S ARGUMENTS

5. Applicant's arguments regarding the 35 U.S.C. 103(a) rejection of Claims 23 – 26, 30 – 31 and 33 – 35 as being unpatentable over McCarthy et al (U.S. Patent No. 5,883,199) in view of Kanamori et al (U.S. Patent No. 6,262,184), 35 U.S.C. 103(a) rejection of Claims 27 and 36 and 38 – 39 as being unpatentable over McCarthy et al (U.S. Patent No. 5,883,199) in view of Kanamori et al (U.S. Patent No. 6,262,184) and further in view of Tokushige et al (U.S. Patent No. 5,866,634) and 35 U.S.C. 103(a) rejection of Claims 28 – 29 and 32 as being unpatentable over McCarthy et al (U.S. Patent No. 5,883,199) in view of Kanamori et al (U.S. Patent No. 6,262,184) and Tokushige et al (U.S. Patent No. 5,866,634) and further in view of Ikado et al (U.S. Patent No. 5,766,748) of record in the previous Action, have been carefully considered but have not been found to be persuasive for the reasons set forth below.

Response to Rejection Under 35 U.S.C. 103(a)

Applicant argues, on page 5 of the remarks filed July 28, 2004, that the rejection as been rendered moot in view of Applicant's amendment to Claim 23.

However, as discussed in the new rejection above, the toughening additive taught by Kanamori et al comprises a polyurethane as well as a polybutylenesuccinate.

Applicant also argues on page 5 that it would not have been obvious for one of ordinary skill in the art to vary the thickness disclosed by McCarthy et al.

However, Applicant does not state the reasons that it would not have been obvious to vary the thickness.

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Applicant also argues, on page 6, that McCarthy et al does not disclose a skin layer comprising polylactic acid, because McCarthy et al comprises a paper layer that does not comprise polylactic acid.

However, as stated on page 2 of the previous Action, McCarthy et al discloses a polylactic acid layer having polylactic acid layers on at least one other side of that layer and therefore discloses skin layers comprising polylactic acid.

Applicant also argues on page 6 that Kanamori et al and Tokushige et al do not disclose skin layers comprising polylactic acid.

However, as stated above, McCarthy et al discloses skin layers comprising polylactic acid.

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

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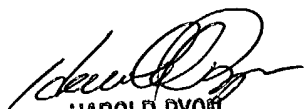
Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marc Patterson, whose telephone number is (571) 272 – 1497. The examiner can normally be reached on Monday through Friday from 8:30 AM to 5:00 PM. If attempts to reach the examiner by phone are unsuccessful, the examiner's supervisor, Harold Pyon, can be reached at (571) 272 – 1498. FAX communications should be sent to (703) 872-9310. FAXs received after 4 P.M. will not be processed until the following business day.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://paired.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at (866) 217 – 9197 (toll – free).

Marc A. Patterson, PhD.

Marc Patterson
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HAROLD PYON
SUPERVISORY PATENT EXAMINER
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10/13/04